PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 10/807,018

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For: Shingle With Sharply Defined Tabs Separated by Slots and Method of Making

Inventors: Husnu M. Kalkanoglu, et al

Examiner: John Frederick Parker

Art Unit: 1762

Atty. Doc. No.: 116-03

DECLARATION OF RICHARD A. SNYDER UNDER 37 C.F.R. § 132

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

1. I, Richard Allan Snyder, have been intimately involved with the roofing industry for over 34 years. I am very familiar with patents in the roofing industry and am a patentee on 2 such patents. A brief copy of my curriculum vitae is attached hereto as Exhibit A.

2. I am an employee of CertainTeed Corporation, the assignee of the above application. I am not a co-inventor of the above patent application, and I have no economic interest in the obtaining of a patent on this application.

3. I am familiar with the above patent application and the basis for rejection of it as set forth in the Official Action (Final Rejection) of March 2, 2007 and in the Advisory

Action of June 1, 2007, as well as the reference to Koschitzky and the Admitted Prior Art (APA) of pages 1-2 of this patent application.

4. The cutting of the slots of a given width that are referred to in clause (f) of claim 1 of the present application and that are completely removed as are referred to in clause (f) of each of claims 4 and 5 constitute parts of the claimed invention producing a number of mechanical and functional effects and advantages, including:

(a) the cutting of the slots allows for thermal expansion of the tabs in the longitudinal direction under hot roof conditions, such as occurs in elevated temperature conditions, especially during summer in southern geographic areas of the U.S., allowing for leftward and rightward movement of the tabs, rather than buckling of the tabs;

(b) the cutting of the slots prevents upward bowing of the exposed-wind-installed portion of the shingles under conditions of thermal expansion;

(c) the cutting of the slots accommodates the shingles conforming to non-planar surface portions of roofs on which they are installed;

(d) when shingles are being applied over other, pre-existing shingles in re-roofing conditions, the cutting of the slots accommodates the shingles conforming to surface irregularities of pre-existing shingled roofs, and

(e) the cutting of the slots, at their upper ends, of a given course of shingles, helps in aligning a next-overlying course of shingles.

5. The steps of applying granules referred to in clauses (c) and (d) of claim 1, clause (g) of claim 2, clauses (c) and (d) of claim 3, clause (g) of claim 4, clauses (c) and (d) of claim 5 and clause (g) of claim 6 constitute parts of the claimed invention, producing a number of mechanical and functional effects and advantages, including:

(a) preventing ultraviolet (UV) radiation from degrading the asphalt;

(b) providing bulk and thickness to shingles that make them more difficult for wind to lift tabs thereof and possibly break the tabs, causing leakage;

(c) providing bulk to shingles for easier handling upon installation; and

(d) providing an intermediate layer between overlapping shingles that prevents the asphalt layers on shingles from sticking together when adjacent shingles are packaged in overlying relation for shipment.

6. In the roofing industry, for many years, the thrust of shingle developments and improvements has been to make manufactured asphalt shingles that, when laid up on a roof, give, to varying extents, appearances similar to shingles traditionally made of natural materials, especially slate shingles, shake shingles (e.g. cedar shakes) and tile shingles.

7. Such manufactured asphalt shingles are generally of multi-tab construction (usually 3 or 4 tabs to simulate individual shingles, tiles, or shakes), and a roof covered by manufactured asphalt shingles can cost considerably less than one covered with natural shingles, such as slate, tile, and cedar shakes.

8. Examples of shingle developments that effect the appearance of natural materials are laminated asphalt layers on shingles to provide thickness, overlay (a layer of additional asphalt and granules) areas on shingles to provide thickness, dark horizontal lines on tabs of shingles to simulate individual natural shingles by providing differently colored granules on different adjacent tabs of the same multi-tab shingle, to give the illusion of thickness, irregular cuts on lower edges of tabs to simulate irregularities of natural materials, to mention a few of such developments.

9. There are many other such shingle developments that have been made over the years, aimed at simulating the appearance of natural materials, and they are not regarded in the shingle trade as being obvious ornamentation. To the contrary, the industry has invested heavily in processes and structural changes in manufactured shingles, through untold numbers of teams of engineers throughout the shingle industry working on such developments, and many millions of dollars have been spent, with the goal of making improvements that simulate natural materials through manufactured asphalt shingles.

10. The developments and investments referred to in paragraph 6-9 above have resulted in, and continually result in, issued U.S. patents granted because of the effects that are created in giving the appearance, in different ways, of natural roof covering materials, to manufactured asphalt shingles.

11. U.S. patent 5,664,385 to Koschitzky, cited in this application file, is an example of simulated individual natural shingles by having differently colored adjacent tabs on the same shingle by using slots to provide "an accentuated visual demarcation between adjacent patches of granules" (see Claim 1 and Summary of Invention thereof). The claims of that patent were not refused as an obvious modification simply because they were aimed at providing "...an accentuated visual demarcation between adjacent patches of granules" [i.e., they were for decorative or aesthetic purposes].

12. I have observed over many years that, in the shingle art, the U.S. Patent Office regularly issues utility patents that are in the category that is specifically directed to aesthetic or ornamental aspects of shingles and that such satisfies any requirement of mechanical function, such as giving manufactured asphalt multi-tab shingles the appearance of natural materials or for the purpose of providing other aesthetic or ornamental effects. Examples of such patents are the following, all of which are in this category:

- U.S. patent 4,130,974 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, "simulating a row of wooden shingles";
- U.S. patent 4,207,936 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, texturing the surface of wood to provide a rough appearance;
- U.S. patent 4,274,243 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to simulate a series of alternating ridges and valleys of a portion of a tile covered roof;
- U.S. patent 4,366,197 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to simulate a plurality of shingle elements laid side-by-side;

- U.S. patent 4,402,169 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide an aesthetically attractive shadow line to simulate thickness;
- U.S. patent 4,416,940 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, for imparting a simulated weathered-copper appearance to a substrate;
- U.S. patent 4,434,589 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a decorative appearance that somewhat resembles that of a shake roof ridge cover;
- U.S. patent 4,439,955 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a decorative appearance that somewhat resembles that of a shake roof ridge cover;
- U.S. patent 4,583,344 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to simulate a thatched roof;
- U.S. patent 4,611,451 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to simulate a thatched roof;
- U.S. patent 4,672,790 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a three-dimensional highly textured appearance;
- U.S. patent 4,739,603 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to simulate a thatched roof;
- U.S. patent 5,186,980 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a varied appearance for the shingles of a bundle when installed on a roof;
- U.S. patent 5,232,530 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to enhance the appearance of a roof by providing enhanced relief;

- U.S. patent 5,305,569 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a pleasing layered appearance to the roof;
- U.S. patent 5,375,387 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to simulate an authentic roof;
- U.S. patent 5,426,902 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide visually sharp, precise delineation between zones of lighter and darker shading;
- U.S. patent 5,595,036 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide roof shingles which appear decorative and stylish and to provide a visually attractive appearance simulating an impression of thicker shingles;
- U.S. patent 5,611,186 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide the appearance of depth or thickness often associated with wood shingles;
- U.S. patent 5,660,014 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide visually sharp, precise lines of delineation between portions of lighter and darker shadings;
- U.S. patent 5,666,776 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide an appearance of shingle depth created by the combined visual appearance of the color contrasts and gradations provided the different shingle sheets;
- U.S. patent 5,901,517 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide visually sharp, precise delineation between zones of lighter and darker shading;
- U.S. patent 6,014,847 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to produce staggered shadow lines which enhance the three-dimensional appearance of a roof surface upon which the shingles are applied;

- U.S. patent 6,025,052 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to realistically resemble the appearance and texture of natural slate;
- U.S. patent 6,125,602 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to give the resulting roof having such ridge covers thereon a pronounced three-dimensional appearance;
- U.S. patent 6,174,403 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to create a pleasing color contrast and accentuate the difference in elevation between the shingle layers and to present a random or non-random color pattern;
- U.S. patent 6,182,400 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to create a ridge cover having an appearance similar to that of a shake shingle roof;
- U.S. patent 6,190,754 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide color gradation from light to dark across a shingle;
- U.S. patent 6,195,951 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a shingle with visually sharp, precise delineations between zones of lighter and darker shading;
- U.S. patent 6,212,843 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to yield the appearance of shingles that are thicker than they actually are, with transverse shadow lines;
- U.S. patent 6,226,949 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to have the roofing materials simulate natural thatch material;
- U.S. patent 6,289,648 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide color gradations on portions of the shingle;

- U.S. patent 6,305,138 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide visually sharp, precise delineation between zones of lighter and darker shading;
- U.S. patent 6,361,851 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a visually distinguishable difference in texture between different portions of the shingle;
- U.S. patent 6,419,780 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a wide variety of aesthetic effects by varying the color formulation of the granules on the shingle;
- U.S. patent 6,455,113 is for the purpose of making a shingle or tile structure directed to aesthetic or ornamental aspects of shingles; namely, to create a smooth continuous snow drift appearance when the tiles are affixed to a surface;
- U.S. patent 6,467,235 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to yield the appearance of multi-tab shingles that are thicker than they actually are, with transverse shadow lines;
- U.S. patent 6,523,316 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide visually sharp, precise delineation between zones of lighter and darker shading;
- U.S. patent 6,607,781 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide a decorative metallic appearance and enhanced stability against degradation of color;
- U.S. patent 6,679,020 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, for enhancement of the shingle's visual appeal and thickness;
- U.S. patent 6,679,308 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, for enhancement of the shingle's visual appeal and thickness;
- U.S. patent 6,684,587 is for the purpose of making a shingle structure directed to aesthetic or ornamental aspects of shingles; namely, so that the shingle

impressions and the multiple shingle impression courses give the appearance that the corner piece substantially blends into siding panels;

- U.S. patent 6,698,151 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, so that the shingles optically simulate a tiled roof;
- U.S. patent 6,715,252 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide visually sharp, precise delineation between zones of lighter and darker shading;
- U.S. patent 6,823,637 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, so that a shading area having granules of different color or shade in appearance than other portions of the shingle, are provided;
- U.S. patent 6,907,702 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to give the appearance of shingles having different lengths;
- U.S. patent 6,920,730 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, for enhancement of the shingle's visual appeal and thickness;
- U.S. patent 6,983,571 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, so that the construction panel imitates the appearance of tile, naturally occurring shingles, or shakes, or slate;
- U.S. patent 7,073,295 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, to provide the shingle with an appearance of depth and thickness at adjacent shingle ridge covers on a roof;
- U.S. patent 7,117,652 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, so that the thatch roofing members appear to be thicker than in actuality;
- U.S. patent 7,240,462 is for the purpose of making a shingle or roof structure directed to aesthetic or ornamental aspects of shingles; namely, so that the

overlay shading area of the shingle is darker in appearance than a portion of a remainder of the overlay member;

The granting of patents because of ornamental or aesthetic features that are enabled by structural features of the shingles that produce such ornamental or aesthetic features has thus been the practice of the U.S. Patent Office for more than the last 30 years.

13. Attached hereto as Exhibits B and C are, respectively, a partial specimen and a photograph of a partial specimen of a 4-tab shingle made in accordance with the method of at least claims 1-8 of the present patent application. It can readily be seen that the entire intermediate area between adjacent tabs is removed by the cutting away of material that was otherwise in the slot of a given width, to leave visually sharp, precise starting and ending delineations at the ends of the tabs [or primary] areas. Thus, the tabs are sharply defined.

14. In contrast to the shingle of Exhibits B and C, the shingle of Koschitzky '385 purposely and intentionally leaves portions of the intermediate areas on each side of the tabs. I note that, repeatedly, throughout the specification and claims of Koschitzky, such remaining intermediate portions of the areas are shown as intermediate areas 36a and 36b of Fig. 7 of Koschitzky. I also note that throughout the Koschitzky patent, Koschitzky repeatedly discusses the complete removal of intermediate areas. Thus, while having the goal of producing shingles which accentuate the visual demarcations between adjacent differently colored tab areas of granules, Koschitzky cannot effectively do so, because a significant percentage of similarly colored granules on the tab at one side of the slot is present in the granules on the tab at the opposite side of the slot.

15. I am aware that the test for whether or not an invention is obvious includes a determination of the scope and content of the prior art, a determination of the differences between the prior art and the claims under consideration, and a determination of the level of ordinary skill in the pertinent art.

16. The patents that I have provided in paragraph 12 of this declaration, are representative of the scope and content of the prior art. They do not teach the subject matter of the claims of the present application as set forth in the amendment of December 22, 2006 in this application, even though, in virtually every instance, they are directed to providing aesthetic features that tend to simulate natural materials, such as individual slates, individual tiles, or cedar shakes via manufactured multi-tab asphalt shingles.

17. The differences between the prior art and the claims at issue are as set forth in the claims present in the application, and include the failure of the prior art to have intermediate granule areas (having a combination of granules of different aesthetics in adjacent tabs) that are completely removed by cutting slots between the shingle areas that comprise the adjacent tabs. Each slot completely removes the intermediate combinations of granules on each side of the slot.

18. In my experience over many years, the level of ordinary skill in the art is most often a person with a college degree and a number of years of experience in the shingle art. I note that, notwithstanding this level of skill in the art, the prior art has failed to arrive at the shingles that are made in accordance with the instant invention. In fact, the inventor Koschitzky of U.S. patent 5,664,385, the reference upon which the rejection in this case is based, is well known in the shingle industry and is a patentee in the U.S. and Canada. The Assignee of the '385 patent, IKO Industries Ltd., is a Canadian company which claims to have over 3,000 employees. Notwithstanding that, it is apparent from the U.S. patent 5,644,385 to Koschitzky that portions of the intermediate granule areas comprising mixtures of granules from adjacent tabs of different colors or aesthetics are present on each side of the slot of a multi-tab shingle. Koschitzky clearly did not solve the problem of having clear lines of demarcation resulting in a sharpness in the different color or aesthetic configurations from tab-to-tab, to give the appearance of completely different and separate shingles or tiles, from tab-to-tab across a shingle; rather, Koschitzky has some portion of the intermediate area that has in it granules from adjacent tabs, on each side of the slot, thereby necessarily resulting in a blended zone on each side of the slot, rather than simulating the appearance of uniquely colored, separate slates, tiles, cedar shakes or the like.

19. It is therefore evident that Koschitzky does not disclose the present invention, and the present invention would not be obvious from Koschitzky.

20. Shingles made in accordance with this patent application have enjoyed surprisingly rapid commercial success. For example, comparing the commercial success of this laminated shingle of CertainTeed which has been commercially sold for less than 4 years, with another laminated shingle of CertainTeed that has been a commercial success over about a 15 year period is stunning. In just this short sales period this shingle has already achieved a level of sales (in the millions of dollars) which is unusual. In the shingle art, the volume of shingle sales is usually measured in "squares", with one square of shingles covering 100 square feet of roof. In the short period of time that the shingle of this invention has been on the market, its year-to-date sales volume, as measured in squares, is already over 80% of the year-to-date volume of the other successful shingle that has been on the market for 15 years.

21. Considering the failure of Koschitzky and the other art referenced in paragraph 12 of this Declaration to teach the present invention, it is my opinion based upon my experience in the shingle art that this invention is not obvious.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

August 17, 2007
Date

Richard Allan Snyder
Richard Allan Snyder

Richard Allan Snyder
Manager, Roofing Product Compliance
CertainTeed Corporation, Blue Bell, PA

Richard (Allan) Snyder has been a member of the asphalt roofing industry for 34 years, since graduating with a Master's degree in Chemical Engineering from Rutgers University. He has held positions in Product Development, Product Compliance, Technical Service, Specifications, and Packaging Design at CertainTeed supporting all varieties of asphalt roofing products including shingles, built-up roofing, modified bitumen roofing membranes, adhesives, and roof coatings. He is co-author of CertainTeed's unique and well-respected "Shingle Applicator's Manual" and "Shingle Technology Manual". Allan is currently Manager of Roofing Product Compliance at CertainTeed Corporation, located in Blue Bell Pennsylvania. He is named co-inventor on two issued patents related to roofing. Allan's technical background, extensive experience with testing of roofing products and systems, and meticulous attention to detail have provided valuable technical leadership within CertainTeed and also to a number of industry organizations.

Allan has remained intensely involved in the roofing industry by participating in a number of key organizations including ARMA, CRRC, CSA, ICC, NRCA, RICOWI, and UL's Standards Technical Panel. He has co-authored articles for ARMA (Asphalt Roofing Manufacturer's Association) and RCI (Roof Consultants Institute). He has been a dedicated and active member in many of ARMA's Technical Committees, including the Joint ARMA/NRCA Quality Control Task Force, High Wind Task Force, Codes Steering Group, Ventilation Task Force, and helped to revise and update ARMA's well known Residential Asphalt Roofing Manual. He served as Chairman of the Wind-Research Subcommittee for two years. He is a member of the Construction Specifications Institute (CSI) and the American Institute of Chemical Engineers (AIChE).